

REMARKS

Applicants respectfully request reconsideration. Claims 1-42 were previously pending in this application. Claims 1-4, 15-20, and 30-34 have been amended. As a result, claims 1-42 are pending for examination with claims 1, 15, and 30 being independent claims. No new matter has been added.

Claim Objections

The Office Action objected to claim 1 based on the assertion that the phrase “a polarization direction of polarized light of said image information” is confusing. Claim 1 has been amended so as to address this objection. In the amended claim, the image display portion displays image information comprising *polarized light*, which describes where the polarized light comes from before being sent to the polarization direction converting means.

The Office Action objected to claims 1, 16, and 31 for supposedly failing to provide a structural relationship between the first polarization plate portion and the second polarization plate portion, and a logical relationship such as their polarization states in relating to the polarization states of the light from the polarization direction converting means. Applicants have amended the claims so that said first polarization plate portion is for viewing with one of a right and a left eye, said second polarization plate portion is for viewing with the other one of the right and the left eye, which inherently provides a structural relationship between the plates. Applicants have further amended the claims such that said first polarization plate portion has a polarization direction so as to output said polarized light of said image information from said first segment, and said second polarization plate portion has a polarization direction so as to output said polarized light of said image information from said second segment, which inherently provides a logical relationship between the polarization states of each polarization plate portion and polarization states of the light from the polarization direction converting means.

The Office Action objected to claims 2, 17, and 32 as supposedly being indefinite as a result of the phrase “separate wave plate filter.” The claims have been amended to remove the word separate from the former phrase “separate wave plate filter.”

The Office Action objected to claims 3, 18, and 33 as supposedly not having established scopes based on the assertion that it is not clear what the optical function of the quarter wave plate is and how it relates to the other polarization elements to make the device operable. Applicants have amended these claims to introduce a second quarter-wave plate and so as to clearly indicate the function of these quarter wave plates. This amendment is enabled by the text at page 15, line 23 to page 25, line 46 of the specification, in relation to the description of Figure 20.

The Office Action objected to claims 4, 19 and 34 as supposedly not having established scopes based on the assertion that it is not clear how the additional half-wave plate relates to the polarization states of the polarization means to make the device operable. Claims 4, 19, and 34 have been amended so as to specify that the polarization direction of said first polarization plate portion is the same as said polarization direction of said second polarization plate portion. This makes the device operable when the additional half-wave plate is present, and is enabled by the description associated with Figure 4A of the specification.

The Office Action objected to claim 28 on the basis that "said image display portion" lacks antecedent basis. Claim 28 have been amended to depend from claim 16, and thus establish proper antecedent basis.

Accordingly, withdrawal of the objections is respectfully requested.

Rejections under 35 U.S.C. §112

The Office Action rejected claims 1-15, 16-20, 25-26, 31-35, and 40-41 under 35 U.S.C. §112 as supposedly failing to comply with the enablement requirement. Applicants address each of the Office Action's rejections in detail as follows.

The Office Action asserted that the specification and claims fails to disclose how a three-dimensional image display can be enabled by simply having a polarization direction converting means and a polarization means having a first polarization plate portion and a second polarization plate portion. Applicants have amended claims 1, 16, and 31 to specify the polarization state of the polarization plates portions such that said first polarization plate portion has a polarization direction so as to output said polarized light of said image information from said first segment, and said second polarization plate portion has a polarization direction so as to output said polarized light of

said image information from said second segment, which inherently provides a logical relationship between the polarization states of each polarization plate portion and polarization states of the light from the polarization direction converting means. Furthermore, claims 4, 19, and 34 have been amended to recite the three-dimensional image display of claim 1, 16, and 31, respectively, where the display further comprises a half-wave plate provided over one of said first and second polarization plate portions of said polarization means so as to face said image display portion, wherein said polarization direction of said first polarization plate portion is the same as said polarization direction of said second polarization plate portion. The specification enables the claims where the first and second portions have the same polarization directions based on the detailed description associated with, for example, Figure 4B of the application. Furthermore, the specification enables the first and second portions having different polarization directions based on the detailed description associated with, for example, Figures 18 and 20 of the application.

The Office Action also asserted that claims 3, 18, and 33 relating to the quarter-wave plate are not enabled. Applicants have amended these claims to introduce a second quarter-wave plate and so as to clearly indicate the function of these quarter wave plates. This amendment is enabled by the text at page 15, line 23 to page 25, line 46 of the specification, in relation to the description of Figure 20.

The Office Action also asserted that claims 4, 19, and 34 relating to the additional half-wave plate are not enabled. Claims 4, 19, and 34 have been amended so as to specify that the polarization direction of said first polarization plate portion is the same as said polarization direction of said second polarization plate portion. This makes the device operable when the additional half-wave plate is present, and is enabled by the application description associated with Figure 4A of the specification.

The Office Action also asserted that the specification and claims fails to teach how the image display portion can be adjustable in angular position. Applicants disagree and point to the Figure 2A and 2B of application, and associated text (page 27, line 15 – page 28, line 5), wherein an image display portion may be pivotally rotated about hinge portion 16.

Accordingly, withdrawal of the rejection under 35 U.S.C. §112 is respectfully requested.

Rejections Under 35 U.S.C. §102

a. Faris

The Office Action rejected claims 15 and 30 under 35 U.S.C. §102 as being anticipated by U.S. Patent No. 5,537,144 (“Faris”). Applicants respectfully disagree.

The Office Action asserts that Faris teaches an eye-glass frame (element 9, Figure 6) that serves as the positional holder for holding polarization retarder (element 28), which serves as a polarization direction converting means, and a polarization means comprising a first polarization plate portion and a second polarization plate portion (element 29). Even if Faris does teach the above-mentioned structure, nowhere does Faris teach that the *positional relation is adjustable*, as recited in amended claims 15 and 30.

Therefore, it is respectfully asserted that amended claims 15 and 30 patentably distinguish over Faris, such that the rejection of claim 15 and 30 under §102 as purportedly being anticipated by Faris should be withdrawn.

b. Rosenswaig

The Office Action rejected claims 15 and 30 under 35 U.S.C. §102 as being anticipated by International Application Published under the PCT WO95/00872 (“Rosencwaig”). Applicants respectfully disagree.

The Office Action asserts that Rosencwaig teaches an eye-glass (elements 150, 156, Figure 5) that implicitly includes a frame that serves as the positional holder for holding polarization retarder (elements 152 and 158), which serves as a polarization direction converting means, and a polarization means comprising a first polarization plate portion and a second polarization plate portion (elements 154 and 160). Even if Rosencwaig does teach the above-mentioned structure, nowhere does Rosencwaig teach that the *positional relation is adjustable*, as recited in amended claims 15 and 30.

Therefore, it is respectfully asserted that amended claims 15 and 30 patentably distinguish over Rosencwaig, such that the rejection of claim 15 and 30 under §102 as purportedly being anticipated by Rosencwaig should be withdrawn.

Rejections Under 35 U.S.C. §103

a. Towler and Peterson

The Office Action rejected claims 1-7, 9-10, 12-14, 15-22, 24-25, 27-29, 30-37, 39-40, and 42 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,222,672 (“Towler”) in view of U.S. Patent No. 5,075,655 (“Petersen”). Applicants respectfully traverse the rejection.

Towler is directed to stereoscopic display systems including a liquid crystal material (element 1, Figure 5), a polarizer (element 5), a patterned half wave plate (element 20, Figure 5) having a region A' with an optic axis oriented at -22.5 degrees to the polarization axis of the polarizer 5 and a B' region with an optic axis oriented +22.5 degrees to the polarization axis of the polarizer 5 (Towler, col. 6, line 60 – col. 7, line 10). The viewing arrangement associated with the user's right eye 14 is shown in FIG. 5, where this arrangement comprises a half wave plate 25 having its optic axis 26 orientated at -67.5 degrees to the polarization axis of the polarizer 5 and a polarizer 27 having its polarization axis 28 orientated at 90 degree to the polarization axis of the polarizer 5 (Towler, col. 7, line 10-17). The corresponding viewing arrangement associated with the viewer's left eye comprises a half wave plate having its optic axis orientated at +67.5 degrees to the polarization axis of the polarizer 5 and a further polarizer having its polarization axis orientated at 90 degrees to the polarization axis of the polarizer 5 (Towler, col. 7, lines 17-22).

Petersen is directed to an apparatus for reducing eyestrain caused by viewing a computer monitor screen (Petersen, col. 2, lines 42-52). The device comprises an adjustable-Pd lens frame, a pair of prism lenses carried by the frame and a support for adjustably positioning the frame vertically and axially with respect to the monitor screen (Petersen, col. 2, lines 45-49).

Lack of Motivation to Combine Towler and Petersen

The Office Action asserts that it is implicitly true that a certain positional relationship between the polarization direction converting means and the polarization means has to be maintained so that the corrected image segment will go to the correct polarization plate portion and therefore the correct eyes (Office Action, page 8, lines 12). Applicants disagree that such an assertion is implicitly given to the extent that it would warrant the motivation of the combination of Towler and Peterson. Towler does not teach or suggest that any mechanism is desired to maintain a

positional relationship between the polarization direction converting means and the polarization means.

The Office Action asserts that it would have been obvious to one of skill in the art to apply the teachings of Petersen to modify the stereoscopic image display of Towler to use supporting rods as position holding means for holding the viewing arrangement including the polarization means in the supporting position with respect to the image display device having a polarization direction converting means for the benefit of allowing the positional relationship and the alignment of the polarization means and the polarization direction converting means to be properly maintained to avoid possible errors that occur as a result of misalignment (Office Action, page 8, line 24 – page 9, line 12).

Applicants note that the above assertions by the Office Action has provided no reference in the prior art as to the motivation to combine Towler and Petersen. Applicants request that if the rejections of claims 1-7, 9-10, 12-14, 15-22, 24-25, 27-29, 30-37, 39-40 as purportedly being unpatentable over the combination of Towler and Petersen be maintained, a reference be provided for the motivation to combine Towler and Petersen.

Teaching Away from the Combination of Towler and Petersen

Towler teaches that the system of Figure 5 of Towler has the disadvantage of being sensitive to the tilting of the viewer's head (Towler, col. 8, line 35-60). Towler nowhere states that such a disadvantage is a motivation for somehow fixing the positional relation between the viewing spectacles and the patterned half wave plate 20.

Rather, Towler proceeds to immediately provide an embodiment of a stereoscopic display system having additional elements in both the display device and the viewing spectacles such that considerable improvement in the insensitivity of the transmission profile to tilting of the viewer's head is provided (Towler, col. 8, line 61 – col. 9, line 19). Such a teaching teaches away from combining Towler with Petersen, since the teachings of Towler provide methods for improving the insensitivity to the tilting of a viewer's head. One of skill in the art would be taught away from combining Towler and Petersen, since the teachings of Towler provide methods that make unnecessary any fixing mechanism that may be taught by Petersen.

Combination of Towler and Petersen Does not have All Features of the Claims

Even if the combination of Towler and Petersen was proper, the combination does not have all the features of the recited claims.

Nowhere does the combination teach a half-wave plate provided over one of said first and second polarization plate portions of said polarization means so as to face said image display portion, wherein said polarization direction of said first polarization plate portion is the same as said polarization direction of said second polarization plate portion, as recited in claims 4, 19, and 34.

Nowhere does the combination teach that said first and second polarization plate portions are changeable in position, so that said image information displayed on said image display portion can be changed from a three-dimensional image to a two-dimensional image or vice versa, as recited in claims 5, 20, and 35.

Nowhere does the combination teach that image display portion is adjustable in angular position, as recited in claim 13 and 28.

b. Towler and Goff

The Office Action rejected claims 1-7, 10-14, 15-22, 25-29, 30-37, and 40-42 under 35 U.S.C. §103(a) as being unpatentable over Towler in view of U.S. Patent No. 6,417,894 ("Goff"). Applicants respectfully traverse the rejection.

Goff is directed to an optical device for use at a computer work station including an adjustable arm for supporting a magnifying lens in front of a monitor (abstract).

Lack of Motivation to Combine Towler and Goff

The Office Action further asserts that it would have been obvious to one of skill in the art to apply the teachings of Goff to modify the stereoscopic image display of Towler to use axial adjusting means as a position holding means for holding the viewing arrangement including the polarization means in the supporting position with respect to the image display device having a polarization direction converting means for the benefit of allowing the positional relationship and the alignment of the polarization means and the polarization direction converting means to be properly maintained to avoid possible errors that occur as a result of misalignment (Office Action, page 12, lines 3-10).

Applicants note that the above assertion by the Office Action has provided no reference in the prior art as to the motivation to combine Towler and Goff. Applicants request that if the rejections of claims 1-7, 10-14, 15-22, 25-29, 30-37, and 40-42 as purportedly being unpatentable over the combination of Towler and Goff be maintained, a reference be provided in the prior art for the motivation to combine Towler and Goff.

Teaching Away from the Combination of Towler and Goff

As discussed above, Towler teaches that the system of Figure 5 of Towler has the disadvantage of being sensitive to the tilting of the viewer's head (Towler, col. 8, line 35-60). Towler nowhere states that such a disadvantage is a motivation for somehow fixing the positional relation between the viewing spectacles and the patterned half wave plate 20.

Rather, Towler proceeds to immediately provide an embodiment of a stereoscopic display system having additional elements in both the display device and the viewing spectacles such that considerable improvement in the insensitivity of the transmission profile to tilting of the viewer's head is provided (Towler, col. 8, line 61 – col. 9, line 19). Such a teaching teaches away from combining Towler with Goff, since the teachings of Towler provide methods for improving the insensitivity to the tilting of a viewer's head. One of skill in the art would be taught away from combining Towler and Goff, since the teachings of Towler provide methods that make unnecessary any fixing mechanism that may be taught by Goff.

Combination of Towler and Goff Does not have All Features of the Claims

Even if the combination of Towler and Goff was proper, the combination does not have all the features of the recited claims.

Nowhere does the combination teach a half-wave plate provided over one of said first and second polarization plate portions of said polarization means so as to face said image display portion, wherein said polarization direction of said first polarization plate portion is the same as said polarization direction of said second polarization plate portion, as recited in claims 4, 19, and 34.

Nowhere does the combination teach that said first and second polarization plate portions are changeable in position, so that said image information displayed on said image display portion can be changed from a three-dimensional image to a two-dimensional image or vice versa, as recited in claims 5, 20, and 35.

Nowhere does the combination teach that image display portion is adjustable in angular position, as recited in claim 13 and 28.

c. Towler and Peterson and Sebastian

The Office Action rejected claims 8, 23, and 38 under 35 U.S.C. §103(a) as being unpatentable over Towler in view of Petersen and further in view of U.S. Design Patent No. Des. 383,121 (“Sebastian”). Applicants traverse the rejection.

The Office Action asserts that Sebastian teaches a “*clip* type adjusting means” in Figures 1 and 2. (Office Action, page 9, line 23 – page 10, line 2). Nowhere does Sebastian teach a “*click* type position adjusting means,” as recited in claims 8, 23, and 38.

Also as discussed above, the combination of Towler and Peterson is not proper. Applicants also reserve the right to present any other argument(s) relating to the rejection of claims 8, 23, and 38 under 103(a) as purportedly being unpatentable over the combination of Towler in view of Peterson and Sebastian.

d. Towler and Goff and Sebastian

The Office Action rejected claims 8, 23, and 38 under 35 U.S.C. §103(a) as being unpatentable over Towler in view of Goff and further in view of Sebastian. Applicants traverse the rejection.

The Office Action asserts that Sebastian teaches a “*clip* type adjusting means” in Figures 1 and 2. (Office Action, page 9, line 23 – page 10, line 2). Nowhere does Sebastian teach a “*click* type position adjusting means,” as recited in claims 8, 23, and 38. Therefore, claim 8, 23, and 38 patentably distinguish over the combination, such that the rejection should be withdrawn.

Also as discussed above, the combination of Towler and Goff is not proper. Applicants also reserve the right to present any other argument(s) relating to the rejection of claims 8, 23, and 38 under 103(a) as purportedly being unpatentable over the combination of Towler in view of Goff and Sebastian.

e. Towler and Goff and Peterson

The Office Action rejected claims 9, 24, and 39 under 35 U.S.C. §103(a) as being unpatentable over Towler in view of Goff and further in view of Petersen. Applicants traverse the rejection.

As discussed above, the combination of Towler with Peterson or Goff is not proper. Applicants also reserve the right to present any other argument(s) relating to the rejection of claims 9, 24, and 39 under 103(a) as purportedly being unpatentable over the combination of Towler in view of Goff and Petersen.

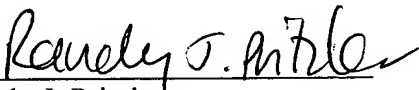
CONCLUSION

A Notice of Allowance is respectfully requested. The Examiner is requested to call the undersigned at the telephone number listed below if this communication does not place the case in condition for allowance.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicant hereby requests any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 23/2825.

Dated: 7/12/06
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Respectfully submitted,

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